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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

ZAND, KAMBIZ

ART UNIT

PAPER NUMBER

2132

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/862,986

Applicant(s)

FRIEDMAN ET AL.

Examiner

Kambiz Zand

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 2-5, 7-10, 13, 15 and 18-20 is/are rejected.
7) ☒ Claim(s) 6, 7, 11, 12, 14, 16 and 17 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.


Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 17 March 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Kambiz Zand


Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this section can be found in the prior office action.
2. The prior office actions are incorporated herein by reference. In particular, the observations with respect to claim language, and response to previously presented arguments.
3. Claim 1 has been cancelled.
4. Claims 2, 5, 8, 9, 11 and 13-18 have been amended.
5. Claims 1-20 are pending.
6. Examiner approves the amendments to the specification by the applicant.

Response to Arguments

7. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.
 - In response to applicant's arguments that Rawlins teach accessibility of USB device with host computer in contrast with applicant's invention where no such accessibility allowed, examiner makes the following remarks: there is no accessibility between the host and the USB device unless authorized, and no accessibility is allowed during normal operation. Claim 11 of the applicant does show accessibility between USB devices and the host computer in contrast with applicant's arguments. Examiner however suggests if there is an element that is specifically not accessible by the host computer or external computer

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whatsoever, then such element should be clearly presented in the claim language. Examiner would reconsider if such clarity be presented only if such clarity does not raise new issue that necessitate further consideration or search.

- Applicant's arguments with respect to claims 6, 7, 11, 12, 14, 16, 17 are persuasive.

Claim Objections

8. **Claims 3-7 and 10-14** are objected to because of the following informalities:
typo error. Examiner suggests the following corrections:

Claim 3-7 and 10-14:

- Replacement of the phrase "A" (line 1, first occurrence) with the phrase "the".

Claim Rejections - 35 USC § 103

9. **Claims 2 and 3** are rejected under 35 U.S.C. 103(a) as being unpatentable over Rawlins (6,216,183).

As per claims 2 and 3 Rawlins teach an apparatus for providing a secure serial bus (USB) comprising a secure channel for transferring data, wherein said apparatus comprises a secure USB domain device coupled to an external host computer, wherein said secure USB domain device comprises elements that are not accessible

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by said external host computer; a USB memory device that is not accessible by said host computer;

a USB processor that is not accessible by said host computer;

a USB host controller that is not accessible by said host computer; and

an internal USB bus that couples said USB memory device, said USB processor, and said USB host controller (see fig.1 and associated text; col.3, lines 8-40,48-50; col.1, lines 21-30; col.2, lines 20-31). It would have been obvious to one of ordinary skilled in the art at the time the invention was made to utilize the USB memory device, processor and host controller inaccessible to the host computer so as to prevent unauthorized access to data by a malicious computer user.

As per claim 4 Rawlins teach an apparatus as claimed in Claim 3 further comprising a USB node coupled to said USB bus, said USB node capable of being coupled to a USB tree (see fig.1 and associated text).

10. **Claim 5** is rejected under 35 U.S.C. 103(a) as being unpatentable over Rawlins (6,216,183) in view of Flannery (5,799,196).

As per claim 5 Rawlins teach all limitations of the claim as applied above but do not disclose wherein said apparatus comprises a secure USB domain device embedded within a host computer. However Flanny disclose the above limitation on col.2, lines 12-14 and 18-22. It would have been obvious to one of ordinary skilled in the art at

the time the invention was made to utilize embedded USB device in Rawlins in order to create hierarchical topology that enhances the scalability of the computer system in order to connect more devices to the root of the host for efficiency reasons.

11. Claims 8-10, 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flannery (5,799,196) in view of Rawlins (6,216,183).

As per claims 8 and 15 Flannery teach an apparatus and method for providing a secure universal serial bus (USB) capable of transferring information over a secure channel, said apparatus comprising: at least one host computer capable of supporting USB input/output devices, said at least one host computer comprising a USB bus, USB client software, and USB system software (see col.2, lines 5-18,12-15,18-22) but do not disclose explicitly a secure USB domain device capable of at least one of: blocking outgoing data flows of confidential information, forwarding outgoing data flows of encrypted confidential information, and forwarding outgoing data flows of non-confidential information. However Rawlins disclose a secure USB domain device capable of at least one of: blocking outgoing data flows of confidential information, forwarding outgoing data flows of encrypted confidential information, and forwarding outgoing data flows of non-confidential information (see col.2, lines 62-67 and col.3, lines 1-18). It would have been obvious to one of ordinary skilled in the art at the

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time the invention was made to utilize Rawlins's USB secure device capable of blocking of confidential data in Flannery system in order to prevent leakage of the confidential information.

As per claim 9 Flannery teach all limitation of the claim as applied above but do not explicitly disclose wherein said secure USB domain device comprises:

a plurality of USB devices;

a first set of data channels for exchanging data with each of said plurality of USB devices; and

a second set of data channels for exchanging data with said at least one host computer. However Rawlins disclose the above limitation in fig.1 and associated text. It would have been obvious to one of ordinary skilled in the art at the time the invention was made to utilize Rawlins's USB secure device capable of blocking of confidential data in Flannery system in order to prevent leakage of the confidential information.

As per claim 10 Flannery teach an apparatus as claimed in Claim 8 wherein said secure USB domain device is embedded within said at least one host computer (see col.2, lines 12-14).

As per claim 13 Flannery disclose all limitation as applied above but do not explicitly disclose wherein said secure USB domain device is external to and

coupled to said at least one host computer. However Rawlins disclose wherein said secure USB domain device is external to and coupled to said at least one host computer (see fig.1 and associated text; col.3, lines 8-18,48-50). It would have been obvious to one of ordinary skilled in the art at the time the invention was made to utilize Rawlins's USB secure device capable of blocking of confidential data in Flannery system in order to prevent leakage of the confidential information.

12. Claims 8-10, 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flannery (5,799,196) in view of Rawlins (6,216,183) in further view of Ben-Dor et al (US2002/0141418 A1).

As per claim 20 Flannery in view of Rawlins teach all limitation of the claim as applied above but do not disclose coupling a virtual conduit interface to said secure USB domain device; coupling said virtual conduit interface to at least one non-USB device, and using said virtual conduit interface to provide a secure USB channel for transferring information to said at least one non-USB device. However Ben-Dor et al disclose coupling a virtual conduit interface to said secure USB domain device; coupling said virtual conduit interface to at least one non-USB device, and using said virtual conduit interface to provide a secure USB channel for transferring information to said at least one non-USB device (see paragraph 73). It would have been obvious to one of ordinary skilled in the art at the time the invention was made to utilize Ben-Dor's above limitation in Flannery in view of Rawlins in order to allow for the USB controller to interface with non-USB hardware.

13. **Claim 18** is rejected under 35 U.S.C. 103(a) as being unpatentable over Flannery (5,799,196) in view of Rawlins (6,216,183) in further view of Lemay et al (US2002/0144115 A1).

As per claim 18 Flannery teach all the limitation as applied above but do not disclose the wherein secure information is transferred between said at least one host computer and said secure USB domain device, thereby establishing at least one secure data channel between said at least one host computer and said secure USB domain device. However Rawlins disclose the wherein secure information is transferred between said at least one host computer and said secure USB domain device, thereby establishing at least one secure data channel between said at least one host computer and said secure USB domain device (see col.3, lines 49-58). Flannery in view of Rawlins however do not disclose such transferring information is in ciphered format. Lemay et al disclose this on paragraph 58 and 59. Therefore it would have been obvious to one of ordinary skilled in the art at the time the invention was made to utilize Lemay et al 's enciphering format features in Flannery in view of Rawlins to prevent the deciphering the information by an intruder.

As per claim 19 Flannery teach all limitations of the claim as applied above but do not disclose wherein data flows from a first device to a second device directly through said secure USB domain device without utilizing resources of said host

computer. However Rawlins disclose wherein data flows from a first device to a second device directly through said secure USB domain device without utilizing resources of said host computer (see col.8, lines 25-32). It would have been obvious to one of ordinary skilled in the art at the time the invention was made to utilize Rawlins utilization resources of said host computer in Flannery system in order to screen its outgoing flow and prevent access to the data from an unauthorized user.

Allowable Subject Matter

14. **Claims 6, 7, 11, 12, 14, 16 and 17** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

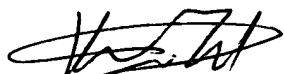
15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kambiz Zand whose telephone number is (571) 272-3811. The examiner can normally be reached on Monday-Thursday (8:00-5:00). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on (571) 272-3799. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kambiz Zand

08/19/2005

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